claims places them in condition for allowance over the art of record. No new matter has been entered. For example, consider claim 1, which recites a method including the steps of "writing a plurality of N data files in the writing area, wherein a first data file is written from a first end of the spiral track, a second data file is written from the end of the first data file on the spiral track, and so on for remaining data files; generating a system sector for the data files, wherein the system sector identifies, for each data file, its location in the writable area and its size; and writing the system sector in the writable area, wherein the system sector is written from the remaining end of the spiral track."

Applicants respectfully submit that the Sciupac reference (USP 5,029,125) does not render claim 1 unpatentable. This is because the Sciupac reference uses a cache memory to interface between a WORM medium and an operating system that assumes erasability of the medium. Thus, the Sciupac reference is directed to the attributes of the cache memory. The cache memory comprises a cache disk allocation area and a cache medium directory area (Col. 5, lines 33-34). All that the Sciupac reference shows as a write-once medium is the card of Figure 8. No discussion or suggestion is made to use an optical disk that "includes a writing area formed in a spiral track" wherein the "a first data file is written from a first end of the spiral track, a second data file is written from the end of the first data file on the spiral track, and so on for remaining data files" and wherein "and wherein "the system sector is written from the remaining end of the spiral track." As discussed by the Applicants, for example, on page 12, lines 10 – 19, such an organization of the data files and system sector information is advantageous in that the writable area is efficiently utilized, regardless of the relative sizes of the data files or the system sector. The Sciupac reference provides no suggestion to provide such an advantage. Accordingly, claim 1

is patentable over the Sciupac reference.

Claim 2 limits claim 1 by adding the steps of "generating an updated system sector whenever there is a change in the data files stored on the writable area, wherein the updated system sector identifies only the changed data files; and writing the updated system sector in the writable area, wherein the updated system sector is written from the end of the first system sector on the spiral track." In contrast, the Sciupac reference never discloses the writing of an updated system sector, wherein the "updated system sector identifies only the changed data files." Instead, Sciupac discloses that the entire FAT and directory is written to the optical card, not just updated directory information. See, e.g., Col. 7, line 38 through Col. 8, line 2. Accordingly, claim 2 is patentable over the Sciupac reference.

Claims 3, 4, and 5 depend upon claim 2 and limit the updated system sector in response to various data file changes. For example, claim 3 recites "wherein the change is an additional data file being written in the writable area." Claim 4 recites "wherein the change is a modified data file being written in the writable area." Finally, claim 5 recites "wherein the change is an indication that a given data file stored in the writable area is to be considered deleted." Accordingly, claims 3 through 5 are patentable over the Sciupac reference.

Claim 6 depends upon claim 1 and is thus patentable over the Sciupac reference for at least the reasons discussed with respect to claim 1.

Claim 7 through 9 depend upon claim 2 and are thus patentable over the Sciupac reference for at least the reasons discussed with respect to claim 2.

Claim 19 recites an optical disk having a writable area "wherein the writable area is formed in a spiral track, the spiral track forming a data area starting at a first end of the spiral track and extending towards the remaining end and forming a system

sector starting at the remaining end and extending towards the first end, wherein the data area comprises a plurality of data files and the system sector identifies the location and size of the data files." Accordingly, claim 19 is patentable over the Sciupac reference for at least the reasons discussed with respect to claim 1.

Claim 20 limits the optical disk of claim 19 to further include "an updated system sector that includes information for accessing updated data files, wherein the updated system sector is written in the writable area starting from the end of the system sector towards the data area along the spiral track." Accordingly, claim 20 is patentable over the Sciupac reference for the reasons discussed with respect to claim 2. Claims 24 through 25 depend upon claim 20 and are thus patentable for at least the same reasons as discussed with respect to claim 20.

In a separate letter to the official draftsperson, the drawings are amended to address the Examiner's objections.

CONCLUSION

For the foregoing reasons, pending claims 1 – 6, 7 – 9, 19, 20, 24, and 25 are in condition for allowance.

If there are any questions regarding any aspect of the application, please call the undersigned at 949-752-7040.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on January 3, 2003.

Eric Hoover — January 3, 2003 Date of Signature

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APPENDIX A

1. (Amended) A method for emulating an erasable storage medium using a non-erasable optical disk, wherein the optical disk includes a writing area formed in a spiral track ~~storing and locating a plurality of file system objects on a WORM storage medium, wherein information can be written to, but not erased from, the storage medium~~, the method comprising:

writing a plurality of N data files in the writing area, wherein a first data file is written from a first end of the spiral track, a second data file is written from the end of the first data file on the spiral track, and so on for remaining data files;

generating a system sector for the data files, wherein the system sector identifies, for each data file, its location in the writeable area and its size; and

writing the system sector in the writeable area, wherein the system sector is written from the remaining end of the spiral track.

~~allocating a writeable area on the storage medium;~~

~~generating a system sector, wherein the system sector includes system information regarding the file system objects on the storage medium;~~

~~writing the system sector starting at one end of the writeable area; and~~

~~writing the content of any of the file system objects at the other end of the writeable area~~.

2. (Amended) The method of Claim 1, further comprising:

generating an updated system sector whenever there is a change in the data files stored on ~~file system objects in~~ the writeable area, wherein the updated system sector identifies the changed data files; and

writing the updated system sector in the writable area, wherein the updated system sector is written from the end of the first system on the spiral track ~~on the storage medium in a location where the updated system sector will be read before any previously written system sectors~~.

3. (Amended) The method of Claim 2, wherein the change is an additional data file being written in the writable area, the additional data file being written from the end of the last data file on the spiral track, and wherein the updated system sector

identifies the location and size of the additional data file ~~generating the updated system sector comprises:~~

~~generating a header for the sector, wherein the header includes the most recent information for accessing at least one or more of the file system objects on the storage medium that are accessible from a host system~~.

4. (Amended) The method of Claim ~~3~~ 2, wherein the change is a modified data file being written in the writeable area, the modified data file being written from the end of the last data file on the spiral track, and wherein the updated system sector identifies the location and size of the modified data file such that the modified data file replaces the contents of a given data file stored in the writeable area ~~header further comprises:~~

~~a sector type parameter that identifies the sector as a system sector~~.

5. (Amended) The method of Claim ~~3~~ 2, wherein the change is an indication that a given data file stored in the writeable area is to be considered deleted ~~header further comprises:~~

~~an entry count parameter that identifies the number of entries that are contained within the system sector~~.

6. (Amended) The method of Claim ~~3~~ 1, wherein the writable area is contained within an annular area of the optical disk, the annular area having an inner diameter and an outer diameter, and wherein the first end of the spiral track is adjacent the outer diameter and the remaining end of the spiral track is adjacent the inner diameter ~~header further comprises:~~

~~a directory identification parameter that is used to determine when to terminate the process of reading the system sector(s)~~.

7. (Amended) The method of Claim ~~3~~ 2, wherein ~~the header further~~ each system sector comprises:

a ~~file~~ directory identification parameter that is used to determine when to terminate the process of reading the system sector(s).

8. (Amended) The method of Claim ~~3~~ 2, wherein ~~the header includes~~ each system sector further comprises:

~~a data block number that indicates the next available writeable location for a file system object~~ a file identification parameter that is used to determine when to terminate the process of reading the system sector(s).

9. (Amended) The method of Claim 2, wherein ~~generating the updated system sector comprises~~ each system sector includes:

~~generating entries for the sector, wherein the entries include information on the content for file system objects that are written to the storage medium~~ a data block number that indicates the next available writeable location for a data file.

19. (Amended) ~~A WORM storage medium for storing and locating a plurality of file system objects, wherein information can be written to, but not erased from, the storage medium~~ The write-once read-many (WORM) optical disk, comprising:

a writeable area on ~~the storage medium~~ the optical disk~~;~~, wherein the writeable area is formed in a spiral track, the spiral track forming a data area starting at a first end of the spiral track and extending towards the remaining end and forming a system sector starting at the remaining end and extending towards the first end, wherein the data area comprises a plurality of data files and the system sector identifies the location and size of the data files.

~~a system sector that includes system information regarding the file system objects on the storage medium, wherein the system sector is written starting at one end of the writeable area; and~~

~~a data area that includes the content of any file system objects that have been added or modified, wherein the data area is written starting at another end of the writeable area.~~

20. (Amended) The ~~storage medium~~ optical disk of Claim 19, further comprising:

an updated system sector that includes information for accessing updated data files, wherein the updated system sector is written in the writable area starting from the end of the system sector towards the data area along the spiral track ~~the file system objects that were updated since previously written system sectors, wherein the updated system sector is written on the storage medium in a location where the updated system sector will be read before any previously written system sectors~~.

24. (Amended) The ~~storage medium~~ optical disk of Claim ~~21~~ 20, wherein ~~the header further comprises~~ each system sector comprises:

a directory identification parameter that is used to determine when to terminate the process of reading ~~the system sector~~ each of the system sectors.

25. (Amended) The ~~storage medium~~ optical disk of Claim ~~21~~ 24, wherein ~~the header further~~ each system sector comprises:

a file identification parameter that is used to determine when to terminate the process of reading ~~the system sector~~ each of the system sectors.

26. (Amended) The storage medium of Claim ~~21~~ 20, wherein ~~the header~~ each system sector includes:

a writeable data block number that indicates the next available location for a ~~file system object~~ data file.

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